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INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)



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| Applicant's or agent's file reference P1326/WOD | FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416) | |
| International application No. PCT/GB 03/04245 | International filing date (day/month/year) 29.09.2003 | Priority date (day/month/year) 27.09.2002 |
| International Patent Classification (IPC) or both national classification and IPC A62B18/08 | | |
| Applicant THE SECRETARY OF STATE FOR DEFENCE | | |

- This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 6 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

- This report contains indications relating to the following items:
 - ☒ Basis of the opinion
 - ☐ Priority
 - ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - ☐ Lack of unity of invention
 - ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - ☐ Certain documents cited
 - ☐ Certain defects in the international application
 - ☐ Certain observations on the international application

| | |
|---|---|
| Date of submission of the demand 21.04.2004 | Date of completion of this report 06.12.2004 |
| Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465 | Authorized Officer Schut, T Telephone No. +49 89 2399-8970  |

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/GB 03/04245

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-19 as originally filed

Claims, Numbers

1-13 as originally filed

Drawings, Sheets

1/5-5/5 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/GB 03/04245**

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application,

☒ claims Nos. 13

because:

☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (specify):

☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 13 are so unclear that no meaningful opinion could be formed (*specify*):

see separate sheet

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

☒ no international search report has been established for the said claims Nos. 13

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the Standard.

☐ the computer readable form has not been furnished or does not comply with the Standard.

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | |
|-------------------------------|-------------|----------|
| Novelty (N) | Yes: Claims | 1-12 |
| | No: Claims | |
| Inventive step (IS) | Yes: Claims | 6,7 |
| | No: Claims | 1-5,8-12 |
| Industrial applicability (IA) | Yes: Claims | 1-12 |
| | No: Claims | |

2. Citations and explanations

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/GB 03/04245

see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB 03/04245

Re Item III **Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

Claim 13 contains references to the description and the drawings. The intended limitations are therefore not clear from this claim, contrary to the requirements of Article 6 PCT.

Re Item V **Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

Claim 1

GB 297 854 A discloses a respirator comprising a respirator face piece (a), a first sealing means (fig. 9, left side of cross-section of channel (I)) suitable for forming a seal on the face of a user so as to define a first cavity between the first sealing means, the respirator face piece and an area of the user's face comprising the eyes, mouth and nose, a second sealing means (fig. 9, right side of cross-section of channel (I)) suitable for forming a seal on the face of the user so as to define a second cavity (I), the second cavity being formed between the second sealing means, the first sealing means, a portion of the face of the user and optionally the respirator face piece, a respirator air inlet (c) for conducting inhaling air to the first cavity, a respirator air outlet (d) for conducting exhaled air from the first cavity, whereby in normal operation air is inhaled and exhaled through the first cavity.

Since exhaled air is passed through the second cavity substantially no air pressure differential exists between the ambient atmosphere and the second cavity which will allow ambient air to enter the second cavity.

The subject-matter of claim 1 differs from the known respirator in that:

- an air pressure supply means suitable for supplying pressurised air to the second cavity has been provided,
- whereby in normal operation air is exhaled solely through the first cavity.

The problem solved by these features is to provide a better seal by supplying air continuously to the second cavity instead of intermittently supplying exhaled air. Furthermore, the pressure in the second cavity is independent (on the rate of exhalation) of the wearer.

The solution to this problem is known from US-A-4 799 477 in which air is separately

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB 03/04245

supplied to the seal. It would be obvious for the skilled person to apply the teaching of this document to the respirator known from GB 297 854 A.

The teaching of US-A-4 799 477 could also be applied to the seal known from US-A-3 680 555 with the same result.

Claims 2-4

The features of these claims are known from US-A-3 680 555.

Claim 5

It is generally known to provide an additional inner mask in order to improve the protection provide by the respirator, see for example WO-A-02/11816. This mask is actually very similar in operation to the one of claim 1. However, the first cavity has not been defined by an area of the user's face comprising the eyes.

Claim 5 cannot be combined with claim 1. Claim 1 specifies the first cavity to be defined between (amongst others) an area of the user's face comprising the eyes, mouth and nose. Due to the introduction of an orinasal mask, the area of the face defining the first cavity does not include the mouth and the nose anymore. Amendment of claim 1 may lead to WO-A-02/11816 becoming relevant for novelty.

Claims 6 and 7

The features of claims 6 and 7 do not appear to be obvious in respect of the documents cited in the search report.

Claim 8

US-A-3 330 273 discloses all features of claim 8 apart from: The sealing piece further comprising a gas inlet for allowing, in use, the supply of pressurised gas to the cavity

The problem to be solved by this difference is the same as for claim 1. Again it is obvious for the skilled person to apply the teaching of US-A-4 799 477.

Claims 9-12

The features of these claims are also known from US-A-3 330 273.